

*Alliance to Save Energy
1925 K Street NW
Wash 20006*

*Letter 507
attn: Mr. Derrickson*

3 October 1979

Jay

MEMORANDUM FOR: See Distribution

FROM:

Special Assistant to the DCI

SUBJECT:

DCI Address to the Alliance
to Save Energy

STATINTL

1. In follow-up to the DCI's memorandum of 3 October, I received a call from Mr. Jay Derrickson, Executive Assistant to the Director of the Alliance to Save Energy (Linda Gallagher).

2. Mr. Derrickson provided the following additional information:

- 17 Oct*
- a. 1800 -- Reception (enter through Garden Gate on 31st & R Street, N.W.)
1900 -- Dinner in the Music Room
2100 -- DCI Address followed by 20 minutes Q&A

b. Wives not included, although "two or three" wives will be there. DCI has option of including Mrs. Turner.

c. The address and Q&As will be taped. The Alliance will provide the tape to us for editing and typing prior to publication.

d. A list of attendees will be provided next week.

STATINTL

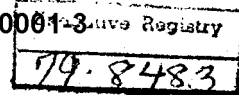
Distribution:

✓ DCI
D/OER

SA/DCI

CAR/NFAC
O/DCI

STATINTL



3 October 1979

1700

MEMORANDUM FOR: Director of Economic Research
Special Assistant to the DCI ([REDACTED])

FROM: Director of Central Intelligence

SUBJECT: DCI Address to Alliance to Save Energy

STATINTL

1. Senator Percy phoned me last night on behalf of himself and Senator Cranston. They are chairman and co-chairman of the Alliance to Save Energy. You will recall that we briefed the board of directors of that group out here about a year and a half ago. He asked me to give a dinner banquet speech for their annual meeting on the 17th of October in the Music Room at Dumbarton Oaks. I agreed.

2. I said I would talk for about 20 minutes and then take questions. I asked if I could bring two people from OER along with me to help respond to the questions. A few people from the oil industry will be there who might have technical questions, though the majority of the 150-200 expected at the dinner are business leaders who contribute to the Alliance's funding.

3. I asked the Senator what he would like me to talk about. He suggested the prospect for Soviet production of oil and the overall prospect for energy. I have something like the following in mind:

a. A description of the 1977 study--a simple chart that shows our best estimate in 1977 at when demand and supply lines will cross. (The Senator said there are facilities in the Music Room for slide projections.)

b. A description of the range of uncertainties both as to consumption and supply. Along with this, we would modify the chart to show each of the two lines not as a line but as a cone of uncertainty. This would reveal that there was a span from perhaps 1980-1988 in our estimate of when the lines would in fact cross.

1700

c. Discussion of trends since then.

(1) The Soviet case--a simple explanation of the Soviet case with particular emphasis on the fact that we're not talking about their reserves; we're talking about what they can exploit in the near term. There will be some discussion of how long it takes to bring new fields on line once they are discovered. This discussion would end then with a comparison of our view today on the Soviet role in the world market with what it was in 1977.

(2) Discussion of the other principal changes in productive capacity, especially the Saudi reduction from 15 million barrels a day to perhaps 11 at the outside.

(3) Also, a very broad discussion of the overall trends elsewhere in the world except for Iran, highlighting that the North Sea, Mexico, and Alaska are no panacea.

d. A discussion of Iran to the effect that it caused at least a psychological crisis when production dropped to zero; that the present rate of production is perhaps 2 million barrels below what it was and that this does have some impact but that it's partly offset by Saudi and other increases; that the real lesson of Iran is that any perturbation of even several million barrels a day due to natural disasters, revolutions, deliberate willfulness (Libya?) has the world at hostage.

e. We would then take up the 1979 study by means of using the chart with the two cones on it that intersected from 1980-1988. Instead, we would show how each cone was reduced in width by our present estimate but on the downward side so that the range of spread is now perhaps 1980-1983(?).

f. This would then leave us the opportunity to wind up by saying that we have a problem; the exact time when it will be critical is unclear, but it will be sooner rather than later; that increased production is not a solution between now and 1985; that synthetics is not a solution between now and 1985; and that leaves the Alliance to Save Energy as the only solution.

g. It seems to me we could end with a bar chart that showed that in the 1970s the world will have consumed 200 billion barrels of oil and discovered only another 100 billion barrels of oil. We might possibly throw on a third bar that would show what the total world oil reserves are estimated to be, making it clear that at 100 billion barrels a decade you can only go a few more decades before we are in trouble.

4. Senator Percy asked me to send him the names and a little background on the two people from OER who would be coming with me to answer questions. He didn't know the precise time. Further, I'd assume that my wife will come to the dinner, but we didn't talk about that. Perhaps [REDACTED] can firm that up.

5. This conference is jointly sponsored by the Alliance to Save Energy and Harvard University. The Senator mentioned [REDACTED] in that connection, though I don't know whether he is actually coming to the dinner.

STATINTL

[REDACTED]
STANSFIELD TURNER

cc: DDNFA
Legislative Counsel
CAR/NFAC
SA/DCI [REDACTED]
[REDACTED] (O/DCI)

ATINTL
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Remarks

Gas lines have disappeared. Oil stocks are being rebuilt.

To the average citizen, the pressure to conserve is dissipating rapidly.

Yet, the international oil market remains precariously balanced.

It is highly vulnerable to unexpected changes in supply or demand.

A coal strike or harsh winter, for instance,

could cause temporary shortages and push oil prices higher.

Further, political disruptions in OPEC countries like Iran

could not only cause longer term shortages,

but could create a psychological panic

that would have more than psychological repercussions.

Even if there are no such untoward events, the outlook for oil supply is dim.

The emerging economic recession is welcome, perhaps,

only because it will moderate oil demand.

The next upswing of the business cycle

will cause demand to rise again.

When it does, we cannot count on increased supplies being available.

Beyond the mid 1980s, it would be unwise

to count on any further increases in world oil output.

In April 1977, the CIA published an unclassified study

on the prospects for international energy.

It concluded that--and I quote--

"In the absence of greater energy conservation, projected world demand for oil will approach productive capacity by the early 1980s. In these circumstances, prices will rise sharply to ration available supplies."--end quote.

*Beginning Policy release
not issues
qual life*

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We were widely criticized for being overly pessimistic.

As it turned out, we were ~~not pessimistic enough~~.

right on target

Witness the 60 percent increase in oil prices since 1978,

and the prospects for continued serious oil market problems
in the foreseeable future.

It has become conventional wisdom to blame this situation

on the events in Iran last winter which removed 3 to 4 million b/d
from the world market.

If we survey the outlook for oil production

in other ~~Persian Gulf~~ ^{MID EAST} countries, today, however,

the situation has worsened everywhere, ~~especially Saudi Arabia~~,
not just in Iran.

Plans for increasing productive capacity in the 1980s have been trimmed;

production ceilings have been imposed at levels below today's capacities.

In Saudi Arabia, policy is to limit output to 8-1/2 million b/d,

except when necessary to mitigate severe market disruption.

Current production of about 9-1/2 million b/d

is close to sustainable capacity,

and little or no increase in capacity is in prospect.

~~They~~ ^{will} ~~once had plans~~ to increase productive capacity
to 16 million b/d, ¹⁹⁸⁰ but they have been dropped. *are uncertain today*

Iraq and Kuwait have both indicated

that they would prefer to reduce rather than to increase production;

and in Iran, the slowdown of maintenance activities

will soon eliminate any option to raise output on short notice

even if the government in Tehran wanted to do so.

Basically these policies reflect a strong preference

for production profiles that stretch out reserves over long periods.

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They also reflect an aversion to even a small risk of impairing
ultimate oil recovery;

and a concern, in the wake of the Iranian revolution,
with the disruptive effect of rapid economic development
spawned by massive inflows of oil money.

I also believe that these oil producing nations
think that we in the oil consuming world
have insatiable appetites.

They sense that the greater they make their productive capacity,
the more they will be subjected to pressure to utilize it.

They can best protect their interests
by not having greater capacity
than it is in their interests to produce.

On top of this,

a lesser proportion of Persian Gulf production
will be available to the industrial countries
as the domestic requirements of those Persian Gulf nations
increase as they increase their industrial development.

If cannot hope for more OPEC production,
what if we look elsewhere?

If start with OECD countries,
^{industrially}
the developed countries, we cannot expect much improvement in
oil production there either

North Sea production will peak around 1982-1983, at ~~3.5M b/d~~ ^{+1.5} (up from 2.1)

That will help, but most private sector analysts expect US oil production
to resume its downward trend now that the Alaskan
pipeline is full.

US oil output has exceeded additions to reserves

by about a two-to-one margin

every year since Prudhoe Bay was added.

The Department of Energy projects US output remaining about stable,

apparently in the belief that improved incentives

due to price decontrol and other measures

will greatly increase oil drilling and recovery.

I know that this is a controversial matter,

I'm simply suggesting that industry consensus

is on the side of a decline in output.

Looking further to the non-OPEC lesser developed countries (LDCs),

production there is growing fairly rapidly, especially in Mexico.

Most of the increase will be consumed locally,

but Mexico is expected to produce about 2.5 million b/d of oil by 1982.

This should permit exports of about 1.1 million b/d

which we do not have on world market today.

In the longer term, Mexican oil resources should permit

greatly increased production and exports,

but it is likely that Mexico will follow cautious, conservationist policies.

Therefore, it would be unwise to count on large increases

in Mexican oil exports during the 1980s.

Looking next at the Communist countries,

our prediction of a decline in Soviet oil production

and a consequent shift in the position of the Soviet Bloc

from a net oil exporter to that of a net oil importer

has caused a good deal of controversy.

However, since our 1977 study, our views have not changed on this.

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We continue to expect Soviet oil production to peak this year or next
and to decline soon thereafter.

Developments during the past two years reaffirm this 1977 estimate
and we find growing support among outside analysts
for the broad conclusions of our opinion,
if not for the particular numbers we project.

Soviet oil production has been nearly flat in the past year.

This is below the Soviet plan,
and development trends in the Soviet industry point to
an impending decline.

Production in the older basins,
especially in the Urals Basin, has been falling.

The entire increase in production in recent years has come from West Siberia,
and about 60 percent of that from its supergiant field
called Samotlor alone.

Moscow had hoped to get large increases in production
from the newer, smaller fields in West Siberia

in the past year or two, but their development is considerably behind schedule.
To keep production rising,

the Samotlor field has been pushed well above planned levels.

Once that field hits peak production, which may have already occurred,
it will probably not be able to sustain that level very long.

With production dropping in the older areas and
in the Samotlor field,

the Soviets can keep total production from falling
only by developing new fields at a far greater rate
than in the past.

The Soviets are pouring large investments into West Siberia,

but they face severe constraints

such as the remoteness and difficult conditions of the area,

including its severe climate.

In addition, there are real limitations on

what the Soviet oil equipment industry can produce

for exploration and development.

This is not to overlook the large unexplored areas of the Soviet Union

which may hold substantial deposits of oil and gas.

Soviet reserves may be large,

but exploratory drilling has been stagnant for years

because of continuous pressure to raise oil output

through further development of known fields.

In any event, it would take a decade or more

to develop any large new fields that may be found

whether they be on-shore, in remote tundra-covered areas, or off-shore.

The Soviets are, of course, searching for alternative energy sources.

Moscow has been pushing gas production with considerable success,

but plans for exploiting coal resources are not being met.

On balance the outlook is for reduced growth

in the total Soviet energy production.

This forces a look at whether and how much energy conservation could help them.

The Soviets' problem is different from ours

and we believe that they will have an ~~extremely~~ difficult time

achieving greater energy conservation.

Very little oil is consumed by private automobiles.

Transportation relies mostly on rail

so is already energy efficient.

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Much heat of homes and buildings is already supplied by cogeneration,

or the efficient use of waste heat from the generation of electricity.

Overall, the bulk of energy in the Soviet Union is used in heavy industry.

Reductions in this area of high priority to them

would be difficult and costly.

The Soviets, therefore, will face painful choices

in allocating their oil and other energy supplies.

They could cut oil exports to the West (1.4M b/d)

or increase oil imports from the Middle East,

but their ability to do either is limited

by their hard currency payments position.

Oil exports have accounted for nearly one-half of the dollar value
of total Soviet exports.

Another relief measure would be to cut Soviet oil exports
to Eastern Europe (1.5M b/d).

Current plans apparently call for these exports to be
constant from 1980-1985,

and substantial cuts would further damage East European economies
which are already encountering difficulties.

Consequently, this strategy could endanger
political stability in the area.

Finally, another option would be for Moscow to force even further reductions
in an already declining rate of economic growth.

It is impossible to predict which combination of these options Moscow will follow.

Part of the oil shortfall will probably impact on the Soviet economy
and part on the balance of payments.

Where does all this leave us?

strength of US
over Sov
Industrial Amer
can supply
bal then
consuming

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These trends in production--in the OECD, in the non-OPEC LDCs,

in the Communist countries, and in OPEC--

add up to a prospective decline in the supply of oil available
to the OECD countries.

Any decline in oil supply for the OECD nations is an alarming prospect.

Traditionally, economic growth within the OECD

has been accompanied by a growth in energy consumption

We do not fully understand the nature of the relationship
between economic growth and the growth in energy consumption.

It may be flexible to some extent.

But, we do estimate that OECD economic growth will be constrained

to no more than 2 to 2-1/2 percent by the supply of energy

that we believe will likely be available to OECD in the next 3 to 4 years.

As we grapple today with incipient recession

and accept such unpleasant measures as high interest rates,

we must be concerned at the prospect that the next economic recovery

may ultimately be limited by a lack of accompanying growth
of energy supply.

// All of the calculations and predictions that I have shared with you this evening
can and will be challenged in their particulars.

I think the key point I would like to leave with you

is--whether specific predictions are correct or not--

we are living in a era of great fragility in the supply of energy.

First, the situation is fragile because we are so dependent on one area of the world,
the Middle East,

an area that is so vulnerable to political turmoil today.

This is an area of the world which is experiencing a revival
of traditonal religious tenets.

Yet at the same time, it is experiencing,

particularly through the impact of vast new oil wealth,

the often antithetical changes

which Westernization and modernization of society bring with them.

~~There is also, of course, the great danger of the unresolved issue of Israel.~~

And there is the danger of unpredictable and erratic

but nonetheless influential, national leaders ~~players~~ on the scene--

~~Muammar Qadhafi being a prime example.~~

It is easy to conclude that it is almost inevitable

that some form of turmoil will beset this area

and affect the availability of oil supply.

A second key factor is that even if there is not some physical upheaval in the Middle East,

a major change of the last 6 years

is a clear recognition by leaders of these countries

that it is not necessarily in their best interests

to produce as much oil as the OECD would want.

Against this situation of the fragility of supply

and the increasing pressures of self-interest, ~~conservation~~ *protection / preserves,*

the role of conservation becomes more prominent.

This role which you advocate so well is, indeed,

the only practical remedy for the next few years.

The alternative--substantially slower economic growth--

would be distinctly more unpleasant.

Nothing else can be as certain to help bring supply and demand into account in the immediate.

It is also the case

that if the OPEC nations are ever to be induced to increase production

beyond what they may consider to be in their economic best interests,
the earnest of extensive and successful US conservation
will almost certainly be necessary.

Today I received an intelligence report on the attitude of ^{one} an important OPEC
leader toward US conservation.

It said that this man has been unsympathetic to US ^{pleas} demarches for
price restraint ^{by} OPEC.

charging that such restraint merely enables the major importers
to put off the task of conservation.

He believes the US record on conservation is particularly poor.
Only with a firm signal on conservation from the United States
could the OPEC nations possibly be induced
to increase production enough

to permit a future economic upswing to continue
rather than be stymied for lack of energy supplies.

Thus, there is every reason to encourage you to continue encouraging our nation
to move boldly in the near term to eliminate the wasteful consumption
of energy.

*Applicant foresight - patriotism -
determination -*

*Strength of America - Citizens
can & do band together & play
active role*

Address by Admiral Stansfield Turner
to the
Alliance to Save Energy
17 October 1979

Thank you, Chuck. You know when Chuck called me and asked me to be with you tonight I accepted with alacrity because of my enthusiasm for what you do and what you stand for, but I must say that I thought, I think, he could have been a little more honest with me and let me know I was going to be on with the final game of the World Series in competition. One expects Senators to be able to predict better than that.

Very seriously, my concern tonight is that because the oil supplies are being rebuilt in our country and the gasoline lines are no longer with us the average citizen does not feel the pressure to conserve today that he should. Yet, as we all in this room are aware the international oil market is precariously balanced today. It is highly vulnerable to unexpected changes in either supply or demand. A harsh winter. A cold strike, for instance, could cause temporary shortages that would again put pressure on oil prices. Further, political disruptions in OPEC countries, like Iran, could cause longer term problems that would not only reduce the long term prospect of oil supplies, but could create psychological panic which would have more than psychological repercussions. Even if there are no untoward events such as these the outlook for oil supply, in our view, is dim.

The emerging economic recession is welcome, perhaps only because it is moderating oil demands. The next upswing of the business cycle, however, will cause that demand to rise again. When it does we cannot count on increased supplies being available. Beyond the mid-1980s, we believe, it would be unwise to count on any substantial increases in world oil production.

Chuck referred to our 1977 publication on the world energy outlook. That was the beginning, incidentally, of a new policy on the part of the Central Intelligence Agency to release as much information as we can in an unclassified form, not only on energy issues but on other issues of national import where we hope and think our studies, the research that we do on the Country's behalf will help to improve the quality of national debate on important topics. That oil study in 1977 came up with the following conclusion which I would like to quote: "In the absence of greater energy conservation, projected world demand for oil will approach productive capacity by the early 1980's. In these circumstances prices will rise sharply to ration available supplies." We were widely criticized for being overly pessimistic. As it turned out we were right on target. Witness the 60% increase in oil prices in 1978, and the prospects for continued serious oil market problems in the foreseeable future.

Now it has become conventional wisdom to blame this situation on the events in Iran last winter when 3 to 4 million barrels of oil were taken off the market. If today though we survey the outlook for oil production in the middle east, the situation has worsened everywhere, not just in Iran. Plans for increasing productive capacity in the 1980's have been trimmed back. Production ceilings have been imposed at levels below today's productive capacities. In Saudi Arabia, policy is to limit production to 8-1/2 million barrels a day, as you are aware, except when they believe circumstances mitigate this--when circumstances require them to mitigate the serious disruptions that would occur in world oil markets. Today they are producing 9-1/2 million, that is close to their sustainable capacity and little or no increase in capacity is in prospect. There were, of course, plans to go as high as a capacity of 16 million barrels a day by the mid-1980's, those plans are uncertain today.

Iraq, Kuwait, they have both indicated a strong preference for cutting back production rather than increasing it. In Iran the slow-down of maintenance on their oil fields will soon eliminate any option that might exist for increases for the short run, even if the government decided to do that. Basically the policies of these countries reflect a strong preference for production profiles that will stretch out their reserves for longer periods of time. They also reflect an aversion to even a small risk of impairing ultimate recovery and they reflect a concern in the wake of the Iranian revolution, with the disruptive effects of rapid economic development spawned by massive inflows of oil money.

I also believe that these oil producing nations think that we in the oil consuming nations have almost insatiable appetites. They sense that the greater they make their productive capacity the greater will be the pressures on them to utilize it. The more that they can protect their interest by simply not having that capacity, the more they are going to do that. On top of this let us recognize that a lesser proportion of the Persian Gulf production is going to be available to industrialized countries in the future. Simply because those countries themselves are industrializing and are going to have greater domestic requirements.

If then, we cannot hope for substantial increases in OPEC production, what if we look elsewhere? Let us start with OECD countries, the industrialized developed countries. Hereto, however, we cannot expect much improvement in the production of oil energy in the years just ahead. North Sea production will peak in 1982, 1983 at a million or a million and half barrels greater than today and that is good and that will help.

On the other hand, here in the United States, most private sector analysts believe that US oil production is going to resume its downward trend now that the Alaskan pipeline is in full use. US oil output has exceeded additions to reserves by about a 2 to 1 margin every year since Prudhoe Bay was added to our reserves.

The Department of Energy does predict that US output will remain stable apparently in a belief that improved incentives, such as decontrol will greatly increase oil drilling and recovery operations. I know this is a controversial matter, but I am simply suggesting that we see industry in a consensus which is on the side of a decline in US output.

Looking beyond the OECD countries to the non-OPEC lesser developed countries, production there is growing fairly rapidly, especially in Mexico. But most of the increase, other than in Mexico is going to be consumed by the same kind of industrialization requirements which I have mentioned with respect to the Middle East. Mexico, by 1982 should be producing perhaps 2 1/2 million barrels a day of which 1.1 million perhaps will be available for the international market that is not there today. In the longer term, of course, Mexican resources are such that they would permit greatly increased production and export, but it is quite likely that Mexico will adopt a cautious conservationist policy. In our view it would be unwise to count on large increases of Mexican oil exports in the 1980's.

Next we can look at the Communist countries, what can they contribute? Unfortunately, our prediction of a decline of Soviet oil production and a consequence shift in the position of the entire Soviet Bloc of being net exporters to net importers still is our position. It was controversial when we announced it in 1977 but nothing has come to change our opinion on it since. We do expect

total Soviet oil production to peak this year or next and then to begin to decline shortly thereafter. Developments of the last 2 years have reaffirmed this 1977 estimate because we also find growing support in other analysts for these broad conclusions even if they may not agree with the specific particulars. Soviet oil production, for instance, has been almost flat for almost a year now. This is below the Soviet plan. Development trends throughout the Soviet oil industry point to an impending decline. For instance, production in the older basins, especially those in the Urals is definitely falling. The entire increase in production in the Soviet Union in recent years has come from West Siberia and there, 60% of it has been from one giant super field Samotlor. Moscow had hoped to get large increases in production from newer, smaller fields in West Siberia in recent years, but the development of these is lagging way behind schedule. Today, to keep production from declining, the Samotlor field has been pushed well above planned levels of production. Once that field itself hits its peak, and it may already have done that, it very likely will be unable to sustain that peak level for very long. With production then declining in the older areas, and then in the Samotlor field the Soviets can maintain or increase total production only by developing new fields at a far greater rate than they have been able to do in recent years. Now they are pouring large amounts of investment into West Siberia, but you recognize they face severe constraints there. Constraints of the remoteness and difficult conditions, including of course the very inhospitable climate.

In addition, there are real limitations on what the Soviet oil equipment industry can produce for exploration and development. Now this is not to overlook the fact that there are large undeveloped, unexplored areas in the Soviet Union which may have gas and oil. Soviet reserves may well be large, but exploratory drilling has been stagnant for years because of these pressures to accent current production from current fields. In any event it would take a decade or more to develop large new fields that may found whether they are onshore in remote, tundra-covered areas or offshore in the water. The Soviets are, of course, searching for alternative sources to oil. They have been pushing gas production heavily and have been quite successful in it. But on the other hand their efforts to exploit their coal resources more fully have been falling way behind. It is then, our net opinion, that on balance between gas, oil and coal the Soviet Union faces a prospect of declining total production of energy in the years just ahead. This forces them, of course, to look as you are looking at conservation and whether that can help.

The Soviet problem, though, is quite different than ours. We believe they are going to have a more difficult time than we in effecting conservation. Very little oil is consumed by private automobiles in the Soviet Union. Transportation is almost all by rail and is energy efficient already. Much of the heat in homes and buildings is also already supplied by cogeneration. Overall

the bulk of Soviet energy today is consumed by heavy industry and we all know how much priority the Soviets have traditionally put on that area and how costly and difficult it would be for them to cut back there. As a result they face some painful choices today. I might add that one of the great strengths of our country is that part, part of the responsibility for that kind of painful decision as to how we solve this problem rests with the individual citizen because we do have capacity in this country for groups like this, for individuals, for corporations to effect the oil consumption in a major way. In the Soviet Union those decisions all have to be made by a centralized authority. And here we see the Soviets having these difficult choices in allocating there energy resources.

Looking at what they might do. One avenue would be to cut their oil exports to the West about a million or a million and a half barrels a day right now. Or to increase oil imports from the Middle East. You recognize, however, that their ability in either of these directions is limited by their hard currency position. For instance, today, almost half of the dollar value of total Soviet exports is earned by their oil exports. A different direction for relief would be to cut their exports to Eastern Europe, about a million and a half barrels a day right now. From what we can understand their current plans are to keep that production at about its present level through 1985 or so. They also must recognize that substantial cuts in these deliveries in energy to Eastern Europe would compound the already serious economic problems those

Eastern European countries are having. And they would also have to be concerned of the effect such cut backs might have on the political stability in that tender area. Another option for Moscow would be to force even greater reductions in an already declining rate of economic growth. It is impossible for us to predict which option or combination of options the Soviets are likely to elect. One suspects that it will be some impact on the Soviet economy. Some slowing down of growth, less in the industrial sector than in the consumer and some impact on their balance of payments. Some lesser ability in the long run to import from us.

Where does all this leave us? These trends in production in the OECD, in the non-OPEC lesser developed countries, in the Communist countries, and in the OPEC countries all add up in our opinion to a prospective decline in the supply of available energy for OECD countries. Any decline in the supply of energy to those countries must be an alarming prospect. Traditionally, economic growth in the OECD has been accompanied by growth and energy consumption. Now we don't fully understand what exactly that relationship is, between economic growth and the growth of energy consumption. It may be flexible to some extent as was clearly evident after the '73-'74 price rises. It is our estimate today, however, that OECD economic growth will be constrained to no more than 2 to 2-1/2 percent with the supply of energy that we believe is likely to be available to OECD countries in the next 3 to 4 years. As we grapple today with incipient recession and accept such

unpleasant measures as very high interest rates, we must be concerned at the prospect that the next economic recovery may ultimately be limited by the lack of accompanying growth of energy sources.

All of the calculations and predictions that I have been sharing with you tonight may well be challenged in their particulars. I think that the key point which I would like to leave with you, whether the specific predictions are correct or not, is that we are living today in an era of great fragility, great fragility in the supply of energy. First, the situation is fragile because we are so dependent on one area of the world, the Middle East. An area that is so vulnerable to political turmoil today. It is an area of the world which is for instance experiencing a revival of enthusiasm for traditional religious tenets. Yet, at the same time it is experiencing, particularly through the impact of vast new oil wealth, the often antithetical changes and pressures which westernization and industrialization bring with it.

There is also in the Middle East a great danger of unpredictable, erratic, but nevertheless powerful and influential political leaders. In fact, if you look at the total panoply of problems in that region of the world today, it is easy to conclude that it is almost inevitable that some form of turmoil will beset that area within the next few years that will disturb energy supplies.

A second key factor in the fragility of energy supply today, even if there is no upheaval in the Middle East is a major change

that has come about in the last six years. This is a clear recognition by the leaders of these oil producing countries that it is not necessarily in their best interest to produce as much oil as the OECD countries would like. Against this situation then of the fragility of supply, and the increasing pressures for protection of preserves, the role of conservation becomes even more prominent. This role which you advocate so well is indeed, as Senator Percy has said already, the only practical remedy in the next few years. The alternative, substantially slower economic growth would be distinctly more unpleasant. Nothing can be as certain to bring help to bring supply and demand into balance as good conservation in the immediate years ahead. It is also in my view of the case that if the OPEC nations are ever to be induced to increase production beyond what they may consider to be in their economic best interest the earnest of extensive and successful United States conservation will almost be necessary.

Today, for instance, I received an intelligence report on the attitude of one important OPEC leader toward US conservation. This report said that this man has been unsympathetic to US pleas for price restraint by OPEC. He charged that such restraint would merely enable the major consumers of oil to put off this task of conservation, and he believes that the United States record on conservation was particularly poor. Only then with a firm signal on conservation from the United States could the OPEC nations possibly be induced to increase production enough to permit a future economic upswing to

continue rather than to be stymied for lack of energy supplies. There is every reason then to encourage you, to encourage our nation to move boldly and immediately to eliminate wasteful consumption of energy.

I can only applaud the foresight, the patriotism, the determination of Senator Percy, Senator Cranston and those of you who have supported them and this alliance over this several years. As I said once before, the strength of America lies in part in the fact that we as individual citizens that you as an alliance can band together and help to solve our nation's problems, no relying only on central governmental direction. I certainly commend and encourage the fact that you are exerting this leadership in this field it is critical to our Country and to our future.

Thank you very much.

